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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/527,085	03/16/2000	Shmuel Shaffer	CISCP141	1922

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EXAMINER
DINH, KHANH Q

ART UNIT	PAPER NUMBER
2151	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/527,085	SHAFFER ET AL.
	Examiner	Art Unit	
	Khanh Dinh	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/18/2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,11-14 and 28-58* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-6, 11-14 and 28-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____. .

DETAILED ACTION

1.   This is in response to the Request for Reconsideration filed on 10/18/2005.

Claims 1, 3-6, 11-14 and 28-58 are presented for examination.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 5, 6, 11-14 and 28-33, 36-41 and 44-58 are rejected under 35 U.S.C.

103(a) as being unpatentable over Perkins et al US pat. No.6,496,477 (hereafter

Perkins) in view of Voelker, US pat. No.6,370,112 (hereafter Voelker).

As to claim 1, Perkins discloses a method for replicating a plurality of original packets in

a packet flow received by a first device (source 103 fig.1), the packet flow following a

first routing path (119 fig.1) between a source and a destination device, the first routing

path including the first device (103 fig.1), the method comprising:

receiving a request from a second device (destination 105 fig.1) for connecting

with the first device (103 fig.1), the request identified at least one predetermined

criterion (a balance or optimization of temporally-diversity packets) and connecting the

first device with the second device in response to the request (launching packets and

dependent packets as plural flows along plural paths from the first device to the second

device, see fig.1, col.5 line 38 to col.6 line 57).

receiving the packet flow with a first device, the first device (103 fig.1) being

included in the first routing path (119 fig.1) (transferring packet in different routes/paths

from the source device 103 fig.1 to destination device, see col.6 line 17-57).

in the first device, identifying the original packets in the packet flow according to

at least one predetermined criterion (i.e., using reference numeral "i" associated with

destination 105 of fig.1) and generating replicate packets (reconstructing the lost packet

or replicating VoIP packets or duplicate packets, see fig.10, col.6 lines 17-57 and col.23

line 35 to col.24 line 48) corresponding to the original packets (forwarding data packet

streams to the destination, see fig.1, abstract, col.6 line 18 to col.7 line 50, col.8 line 16

to col.9 line 49 and col.29 line 2 to col.30 line 67).

transmitting the original packets from the first device along the first routing path

(119 fig.1) to the source and destination devices and transmitting the replicate packets

from the first device along a second routing path (117 fig.1) the second routing path

being different from the first routing path and including the second device (i.e.,

forwarding two different data streams, col.8 line 16 to col.9 line 49 and col.15 line 67 to

col.16 line 59).

Perkins does not specifically disclose processing data packets in both directions.

However, Voelker discloses processing data packets in both directions (see abstract,

figs.2, 3, col.6 lines 23-57 and col.7 line 37 to col.8 line 53). It would have been obvious

to one of the ordinary skill in the art at the time the invention was made to implement

Voelker's teachings into the computer system of Perkins to process data packets

because it would have rerouted and reorganized the path of a connection within a

connection packet switching network without the loss of data packets when the path of a

connection across network is changed to a superior path.

As to claim 5, Perkins that the destination device being included in the first routing path,

the first device transmitting the original packets indicating the destination device

(forwarding second data stream to the same destination 105 of fig.1, see col.8 line 16 to

col.9 line 49).

As to claim 6, Perkins discloses a test device for facilitating inspection of the replicate

packets (i.e., replicating VoIP packets, see fig.10, col.23 line 35 to col.24 line 53 and

col.27 lines 8-45).

Claim 8 is rejected for the same reasons set forth in claim 1.   As to the added

limitations, Perkins discloses determining which of the original and replicate packets

reach their respective destination devices first, thereby identifying a winner destination

device and awarding a connection to an originating device to the winner destination

device (i.e., selecting paths through a list, tables and algorithm, see col.11 line 20 to

col.12 line 62 and col.14 line 43 to col.15 line 51).

As to claims 11 and 12, Perkins discloses the original packets originate from a source and destination device, the method for replicating the original packets being transparent to the source and destination device (see fig.20, col.6 line 18 to col.7 line 50 and col.30 line 5 to col.31 line 30).

As to claims 13-14, Perkins discloses first device comprising a router, the at least one predetermined criterion comprises at least one selected from a group consisting of a source address, destination address, a socket, a port and a protocol type (see fig.10, col.23 line 35 to col.24 line 53).

As to claims 28, Perkins discloses a router operable to replicate a plurality of original packets in a packet flow received by a processing device, the packet flow following a first routing path which includes a processing device, the router comprising:

a memory having at least a portion of a router (103 fig.1) operating system stored therein and a processor (164.1 fig.1) for controlling operation of the router according to the router operating system, the processor being configured by the router operating system to:

receiving a request from a second device (destination 105 fig.1) for connecting

with the first device (103 fig.1), the request identified at least one predetermined

criterion and connecting the first device with the second device in response to the

request (launching packets and as plural flows along plural paths, see fig.1, col.5 line 38

to col.6 line 57).

receive the packet flow with the router and identify the original packets in the

packet flow according to at least one predetermined criterion (i.e., using reference

numeral "i" associated with destination 105 of fig.1) and generating replicate packets

corresponding to the original packets (forwarding data streams to the destination, see

fig.1, abstract, col.6 line 18 to col.7 line 50 and col.8 line 16 to col.9 line 49).

transmit the original packets from the router along the first routing path (119

fig.1) and transmit the replicate packets (i.e., replicating VoIP packets, see fig.10, col.23

line 35 to col.24 line 53 and col.27 lines 8-45) from the router along a second routing

path (117 fig.1), the second routing path being different from the first routing path and

including the requesting device (i.e., forwarding two different data streams, col.8 line 16

to col.9 line 49 and col.15 line 67 to col.16 line 59).

Perkins does not specifically disclose processing data packets in both directions.

However, Voelker discloses processing data packets in both directions (see abstract,

figs.2, 3, col.6 lines 23-57 and col.7 line 37 to col.8 line 53). It would have been obvious

to one of the ordinary skill in the art at the time the invention was made to implement

Voelker's teachings into the computer system of Perkins to process data packets

because it would have rerouted and reorganized the path of a connection within a

connection packet switching network without the loss of data packets when the path of a

connection across network is changed to a superior path.

Claims 29, 30, 32 ad 33 are rejected for the same reasons set forth in claim 1.

Claim 31 is rejected for the same reasons set forth in claim 28.

Claims 36-40 are rejected for the same reasons set forth in claims 6, 11-14 respectively.

As to claim 41, Perkins discloses a method for replicating a plurality of original packets

in a packet flow received by a first device (source 103 fig.1), the packet flow following a

first routing path (119 fig.1) between a source and a destination device, the first routing

path including the first device (103 fig.1), the method comprising:

receiving a request from a second device (destination 105 fig.1) for connecting

with the first device (103 fig.1), the request identified at least one predetermined

criterion (a balance or optimization of temporally-diversity packets) and connecting the

first device with the second device in response to the request (launching packets and

dependent packets as plural flows along plural paths from the first device to the second

device, see fig.1, col.5 line 38 to col.6 line 57).

receiving the packet flow with a first device (103 fig.1).

in the first device, identifying the original packets in the packet flow according to

at least one predetermined criterion (i.e., using reference numeral "i" associated with

destination 105 of fig.1) and in the first device, generating replicate packets (replicating

VoIP packets or duplicate packets, see fig.10, col.5 lines 38-57 and col.23 line 35 to

col.24 line 48) corresponding to the original packets (forwarding data packet streams to

the destination, see fig.1, abstract, col.6 line 18 to col.7 line 50, col.8 line 16 to col.9 line

49 and col.29 line 2 to col.30 line 67).

transmitting the original packets from the first device along the first routing path

(119 fig.1) to the destination and transmitting the replicate packets from the first device

along a second routing path (117 fig.1) the second routing path being different from the

first routing path and including the second device, wherein the destination is different

from the second device (i.e., forwarding two different data streams to destination, col.8

line 16 to col.9 line 49 and col.15 line 67 to col.16 line 59).

Perkins does not specifically disclose processing data packets in both directions.

However, Voelker discloses processing data packets in both directions (see abstract,

figs.2, 3, col.6 lines 23-57 and col.7 line 37 to col.8 line 53). It would have been obvious

to one of the ordinary skill in the art at the time the invention was made to implement

Voelker's teachings into the computer system of Perkins to process data packets

because it would have rerouted and reorganized the path of a connection within a

connection packet switching network without the loss of data packets when the path of a

connection across network is changed to a superior path.

As to claim 44, Perkins that the destination device being included in the first routing

path, the first device transmitting the original packets to the destination device via the

first routing path (119 fig.1), the second device (105 fig.1) facilitating transmission of the

replicate packets to the destination device via the second routing path (117 fig.1)

(forwarding second data stream to the same destination 105 of fig.1, see col.8 line 16 to col.9 line 49).

Claim 45 is rejected for the same reasons set forth in claim 6.

As to claim 46, Perkins discloses each of the original packets indicate one of a plurality of destination devices, each of the destination devices being logically connected with the first device via a protocol, a first one of the destination devices being included in the first routing path, a second one of destination devices being included in the second routing path and wherein the replicate packets are transmitted along the second routing path to the second one of the destination device (see fig.1, col.8 line 16 to col.9 line 49 and col.19 lines 4-67).

As to claim 47, Perkins discloses determining which of the original and replicate packets reach their respective destination devices first, thereby identifying a winner destination device and awarding a connection to an originating device to the winner destination device (i.e., selecting paths through a list, tables and algorithm, see col.11 line 20 to col.12 line 62 and col.14 line 43 to col.15 line 51).

Claims 48-51 are rejected for the same reasons set forth in claims 11-14 respectively.

Claims 52, 56 are rejected for the same reasons set forth in claim 28.

Claims 53-55, 57 and 58 are rejected for the same reasons set forth in claim 1.

4.   Claims 3, 4, 34, 35, 42 and 43 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Perkins and Voelker and further in view of Kirsch US pat.

No.5,751,956.

Perkins and Voelker's teachings still applied as in item 3 above.   Neither Perkins

nor Voelker specifically discloses a packet redirection protocol and an object caching

protocol.   However, Kirsch discloses a packet redirection protocol and an object

caching protocol (see abstract, fig.2, col.5 lines 24-59 and col.6 line 32 to col.7 line 59).

It would have been obvious to one of the ordinary skill in the art at the time the invention

was made to implement Kirsch's teachings into the computer system of Perkins to

service request from server because it would have reliably tracked and redirected

hyper-link references to external server systems.

Response to Arguments

5.   Applicant's arguments filed on 10/18/2005 have been fully considered but they

are not persuasive.

- Applicant asserts that the cited reference does not disclose identifying
  the original packets in the packet flow according to at least one
  predetermined criterion.

Examiner respectfully disagrees. Perkins discloses a process of sending real

time information from a sender computer to a destination computer by a packet

network. Specifically, Perkins clearly discloses identifying the original packets in

the packet flow according to at least one predetermined criterion by using

reference numeral "i" associated with a destination computer (105 of fig.1) and

indicating only the destination computer out of many computers to reconstruct

the packet in order to optimize multiple class of service (see fig.1, abstract, col.6

line 18 to col.7 line 50, col.8 line 16 to col.9 line 49).

- Applicant asserts that the cited reference does not disclose identifying a

  winner destination device and awarding a connection to an originating

  device to the winner destination device.

Examiner respectfully point out that Perkins discloses identifying a winner

destination device and awarding a connection to an originating device to the

winner destination device (i.e., selecting paths through a list, tables and

algorithm, see col.11 line 20 to col.12 line 62 and col.14 line 43 to col.15 line

51). For example, Perkins further discloses sending one packet that has the

most information first (winner device) and other packets dependent on the

one packet are sent later in time over diverse path. This is equivalent to what

is claimed.

- Applicant asserts that the cited reference does not disclose generating

  replicate packets corresponding to the original packets, transmitting the

  original packets from the first device along the first routing path to the

  destination and transmitting the replicate packets from the first device

along a second routing path the second routing path being different from

the first routing path and including the second device, wherein the

destination is different from the second device and transmit the replicate

packets from the router along a second routing path, the second routing

path being different from the first routing path and including the requesting

device.

Examiner respectfully point out that the Perkins reference discloses the

Applicant's claimed invention. Specifically, Perkins discloses transmitting the original

packets from the first device (103 fig.1) along the first routing path (119 fig.1) to the

destination and transmitting the replicate packets from the first device along a second

routing path (117 fig.1) the second routing path being different from the first routing path

and including the second device (105 fig.1), wherein the destination is different from the

second device (i.e., forwarding two different data streams to destination, col.8 line 16 to

col.9 line 49 and col.15 line 67 to col.16 line 59). Perkins further discloses transmitting

the replicate packets (i.e., replicating VoIP packets, see fig.10, col.23 line 35 to col.24

line 53 and col.27 lines 8-45) from the router along a second routing path (117 fig.1), the

second routing path being different from the first routing path and including the

requesting device (i.e., forwarding two different data streams, col.8 line 16 to col.9 line

49 and col.15 line 67 to col.16 line 59) as rejected above.

Therefore, the examiner asserts that cited prior art teaches or suggests the

subject matter broadly recited in independent claims 1, 8, 28, 29-33, 41 and 52-58.

Claims 3-6, 11-14, 34-40, 42-51 are also rejected at least by virtue of their dependency

on independent claims and by other reasons set forth in the previous office action

[mailed on 7/28/2005]. Accordingly, claims 1, 3-6, 11-14 and 28-58 are respectfully

rejected.

Conclusion

6.   Claims 1, 3-6, 11-14 and 28-58 are rejected.

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (571) 272-3936. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung, can be reached on (571) 272-3939. The fax phone number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh Dinh
Primary Examiner
Art Unit 2151
1/6/2006